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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,190	08/18/2000	Chul-Woo Park	40164/DBP/Y35	6792

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EXAMINER

BERCK, KENNETH A

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,190

Applicant(s)

PARK CHUL-WOO

Examiner

Ken A Berck

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 25 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ge et al. (US 5,859,508) in view of Koide et al (US 6,100,943).

Ge discloses (Fig 5) a vacuum fluorescent display with a pair of substrates (506, 504) spaced apart from each other with a predetermined distance, forming a vacuum cell, filaments (512) mounted within the vacuum cell, anode electrodes (516) formed at one of the substrates, having a conductive layer and a phosphor layer (514) formed on the conductive layer and a control electrode (G1, G2).

Regarding claim 2, Ge discloses the control electrode is formed with a metallic material having a high electrical conductivity.

Regarding claim 4, Ge discloses the anode electrode unit is formed with a plurality of segments, and the control electrode surrounds each segment of the anode electrode unit.

Regarding claim 5, Ge discloses the control electrode is formed in a body or in a separate manner.

Regarding claim 6, Ge discloses the control electrode comprises a main control part (G1) and a subsidiary control part (G2).

Regarding claim 7, Ge discloses the subsidiary control part is formed at a top end portion of the main control unit in a body.

Regarding claim 8, Ge discloses (fig 5b) the subsidiary control part is formed with an extension where the top end portion of the main control unit is extended towards each segment of the anode electrode perpendicular to the main control member.

Regarding claim 9, Ge discloses (fig 12) the subsidiary control part is formed with a connector, the connector interconnecting top ends of the main control part such that the connector crosses each segment of the anode electrode.

Regarding claim 10, Ge discloses the subsidiary control electrode surrounding one or more of the control electrode units.

Regarding claim 11, Ge discloses the subsidiary control electrode is formed with a mesh grid.

Ge discloses the claimed invention except for the control electrode being formed with a metallic material selected from the group consisting of stainless steel, platinum, silver and copper and the control electrode completely surrounding the anode.

Regarding claim 3, It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the most appropriate material, since it would be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Koide discloses (fig 1B) the control electrode (52) completely surrounding the anode in order to direct the flow of electrons.

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Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the display of Ge with the control electrode (52) completely surrounding the anode in order to direct the flow of electrons, as taught by Koide.

Response to Arguments


Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken A Berck whose telephone number is (703)305-7984. The examiner can normally be reached on Mon-Fri 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

kab 
March 10, 2003


MICHAEL H. DAY
PRIMARY EXAMINER